

CLAIMS

- 1 1. A method of completing a well, comprising:
2 running in a tubular string into a cased borehole;
3 expanding a portion of said tubular into supporting contact with
4 the casing;
5 delivering a sealing material through at least one opening in said
6 tubular, with said tubular so supported;
7 closing off said opening.

- 1 2. The method of claim 1, further comprising:
2 expanding said tubular to accomplish said closing after said
3 delivering of said sealing material.

- 1 3. The method of claim 2, further comprising:
2 using said expanding to close off said opening to accomplish a
3 seal between said tubular and said casing.

- 1 4. The method of claim 3, further comprising:
2 providing a seal downhole of said opening as a backup seal to
3 any seal formed by said expanding.

- 1 5. The method of claim 1, further comprising:
2 pushing said opening against the casing to close it.

1 6. The method of claim 2, further comprising:
2 accomplishing said running in, supporting, delivering a sealing
3 material, and closing of said opening by expansion, all in a single trip into the
4 well.

1 7. A method of completing a well, comprising:
2 running a tubular string into a cased borehole;
3 expanding portions of said tubular string into contact with the
4 casing for support thereof;
5 leaving gaps between said tubular string and said casing, with
6 said tubular string supported to said casing;
7 using said gaps for passage of a sealing material;
8 closing said gaps.

1 8. The method of claim 7, further comprising:
2 providing longitudinal contact between said tubular string and
3 said cased borehole;
4 defining said gaps as passages between said longitudinal con-
5 tacts between said tubular string and said cased wellbore.

1 9. The method of claim 8, further comprising:
2 using a fluted expansion swage to create said longitudinal contact
3 for support of said tubular string;
4 providing offset flutes on said swage, located one above another;
5 using lowermost flutes to create said longitudinal contact;

6 using offset flutes to subsequently remove said gaps after pas-
7 sage of said sealing material.

1 10. The method of claim 9, further comprising:
2 offsetting said offset flutes about 90° from said lowermost flutes.

1 11. The method of claim 7, further comprising:
2 accomplishing said running in, expanding, leaving gaps, passage
3 of said sealing material, and closing said gaps in a single trip into the well-
4 bore.

1 12. The method of claim 7, further comprising:
2 providing a seal between said tubular string and said cased
3 borehole by said closing of said gaps.

1 13. The method of claim 1, further comprising:
2 using full circumferential contact for said supporting contact.

1 14. The method of claim 13, further comprising:
2 providing a valve with said opening;
3 operating said valve to close off said opening.

1 15. The method of claim 14, further comprising:
2 providing a sliding sleeve on said tubular string as said valve.

1 16. A method of completing a well, comprising:
2 running in a tubular string into a cased borehole;
3 inserting at least one gripping member between said tubular
4 string and said cased borehole to support said tubular string;
5 leaving a gap adjacent said gripping member;
6 flowing a sealing material through said gap;
7 sealing said gap.

1 17. The method of claim 16, further comprising:
2 expanding said tubular string uphole of said gripping member as
3 said sealing said gap.

1 18. The method of claim 17, further comprising:
2 providing a plurality of locking elements to support said tubular
3 string;
4 wedging said elements in a spaced relation to each other to
5 create longitudinal gaps between said tubular string and said cased borehole
6 for flow of said sealing material.

1 19. The method of claim 18, further comprising:
2 wedging said elements below the top end of said tubular string;
3 expanding said tubular string between said top end and said
4 elements into sealing contact with said cased borehole.

1 20. The method of claim 16, further comprising:
2 accomplishing said running in, inserting the gripping member,
3 leaving a gap, flowing the sealing material, and sealing said gap in a single
4 trip in the well.

1 21. The method of claim 7, further comprising:
2 running in with a swage inside said tubular string;
3 supporting said tubular string while moving said swage uphole to
4 expand portions of said tubular string into contact with said cased borehole for
5 support thereof.

1 22. The method of claim 21, further comprising:
2 locating a force transfer member inside said tubular string during
3 run-in;
4 transferring an expansion force from said swage through said
5 force transfer member to said tubular string for said expansion into said cased
6 borehole for support thereof.

1 23. The method of claim 22, further comprising:
2 configuring said swage to force said gaps closed through a force
3 transfer through a sleeve which serves as said force transfer member.

1 24. The method of claim 9, further comprising:
2 running in with a swage inside said tubular string;

3 supporting said tubular string while moving said swage uphole to
4 expand portions of said tubular string into contact with said cased borehole for
5 support thereof.

1 25. The method of claim 24, further comprising:
2 locating a force transfer member inside said tubular string during
3 run-in;
4 transferring an expansion force from said swage through said
5 force transfer member to said tubular string for said expansion into said cased
6 borehole for support thereof.

1 26. The method of claim 25, further comprising:
2 configuring said swage to force said gaps closed through a force
3 transfer through a sleeve which serves as said force transfer member.

1 27. The method of claim 7, further comprising:
2 reducing the diameter of a part of a tubing string whose original
3 dimension, on said part thereof, was at least as large as the inside diameter
4 of a cased wellbore, to an outer dimension small enough to fit into said cased
5 borehole.

1 28. The method of claim 27, further comprising:
2 expanding said portion of said tubing string to its said original
3 dimension to close said gaps;

4 providing said original dimension as larger than the inside dimen-
5 sion of said cased wellbore;
6 sealing between said tubing string and said cased wellbore by
7 forcing said portion of said tubular string into circumferential contact with said
8 cased wellbore.

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